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Téléphone: (41 22) 338 91 11 - e-mail: wipo.mail @ wipo.int. - Fac-similé: (41 22) 733 54 28

PATENT COOPERATION TREATY (PCT)
TRAITÉ DE COOPÉRATION EN MATIÈRE DE BREVETS (PCT)

CERTIFIED COPY OF THE INTERNATIONAL APPLICATION AS FILED AND OF ANY CORRECTIONS THERETO

COPIE CERTIFIÉE CONFORME DE LA DEMANDE INTERNATIONALE, TELLE QU'ELLE A ÉTÉ DÉPOSÉE, AINSI QUE DE TOUTES CORRECTIONS Y RELATIVES

International Application No. / Demande internationale n° : **PCT/IB02/02537**

International Filing Date / Date du dépôt international : **01 July 2002 (01.07.02)**

Geneva/Genève,
05 May 2003
(05.05.03)

International Bureau of the World Intellectual Property Organization (WIPO)

Bureau International de l'Organisation Mondiale de la Propriété Intellectuelle (OMPI)

PRIORITY DOCUMENT
SUBMITTED OR TRANSMITTED IN COMPLIANCE WITH RULE 17.1(a) OR (b)

J.-L. Baron
Head, PCT Receiving Office Section
Chef de la section "office récepteur du PCT"

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

PCT / IB 0 2 / 0 25 37
International Application No.

01 JULY 2002 (01.07.02)
International Filing Date

INTERNATIONAL BUREAU OF WIPO
Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference (if desired) (12 characters maximum) 99000104/CHE

Box No. I TITLE OF INVENTION

A system and method for delivering representative media objects of a broadcast media stream to a mobile terminal

Box No. II APPLICANT ☐ This person is also inventor

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

NOKIA CORPORATION
Keilalahdentie 4
FIN-02150 Espoo
Finland

Telephone No.

Facsimile No.

Teleprinter No.

Applicant's registration No. with the Office

State *(that is, country)* of nationality: Finland

State *(that is, country)* of residence: Finland

This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

MÄKIPÄÄ, Mikko
Airoranta 9 A
FIN-00830 Helsinki
Finland

This person is:
☐ applicant only
☒ applicant and inventor
☐ inventor only *(If this check-box is marked, do not fill in below.)*

Applicant's registration No. with the Office

State *(that is, country)* of nationality: Finland

State *(that is, country)* of residence: Finland

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☒ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: ☒ agent ☐ common representative

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

AWAPATENT A/S
Teglholm Allé 13
DK-2450 København SV
Denmark

Telephone No. +45 70 20 00 33

Facsimile No. +45 70 20 04 33

Teleprinter No.

Agent's registration No. with the Office

☐ **Address for correspondence:** Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

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(12. 09. 02)

PCT

REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

PCT / IB 0 2 / 0 2 5 3 7
International Application No.

0 1 JULY 2002 (0 1. 07. 02)
International Filing Date

INTERNATIONAL BUREAU OF WIPO
PCT International Application
Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference *(if desired) (12 characters maximum)* 99000104/CHE

Box No. I TITLE OF INVENTION

A system and method for delivering representative media objects of a broadcast media stream to a terminal

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NOKIA CORPORATION
Keilalahdentie 4
FIN-02150 Espoo
Finland

Telephone No.

Facsimile No.

Teleprinter No.

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State *(that is, country)* of nationality: Finland

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This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

MÄKIPÄÄ, Mikko
Airoranta 9 A
FIN-00830 Helsinki
Finland

This person is:
☐ applicant only
☒ applicant and inventor
☐ inventor only *(If this check-box is marked, do not fill in below.)*

Applicant's registration No. with the Office

State *(that is, country)* of nationality: Finland

State *(that is, country)* of residence: Finland

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☒ Further applicants and/or (further) inventors are indicated on a continuation sheet.

Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as: ☒ agent ☐ common representative

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)*

AWAPATENT A/S
Teglholm Allé 13
DK-2450 København SV
Denmark

Telephone No.
+45 70 20 00 33

Facsimile No.
+45 70 20 04 33

Teleprinter No.

Agent's registration No. with the Office

☐ **Address for correspondence:** Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

If none of the following sub-boxes is used, this sheet should not be included in the request.

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

ANTTILA, Akseli
Pajalahdentie 6 B 25
FIN-00200 Helsinki
Finland

This person is:
- ☐ applicant only
- ☒ applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

Applicant's registration No. with the Office:

State *(that is, country)* of nationality: Finland

State *(that is, country)* of residence: Finland

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☒ the United States of America only
- ☐ the States indicated in the Supplemental Box

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

KOPRA, Toni
Sääritie 11 B 6
FIN-03250 Ojakkala
Finland

This person is:
- ☐ applicant only
- ☒ applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

Applicant's registration No. with the Office:

State *(that is, country)* of nationality: Finland

State *(that is, country)* of residence: Finland

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☒ the United States of America only
- ☐ the States indicated in the Supplemental Box

Name and address: *(Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)*

This person is:
- ☐ applicant only
- ☐ applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

Applicant's registration No. with the Office:

State *(that is, country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☐ the United States of America only
- ☐ the States indicated in the Supplemental Box

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This person is:
- ☐ applicant only
- ☐ applicant and inventor
- ☐ inventor only *(If this check-box is marked, do not fill in below.)*

Applicant's registration No. with the Office:

State *(that is, country)* of nationality:

State *(that is, country)* of residence:

This person is applicant for the purposes of:
- ☐ all designated States
- ☐ all designated States except the United States of America
- ☐ the United States of America only
- ☐ the States indicated in the Supplemental Box

☐ Further applicants and/or (further) inventors are indicated on another continuation sheet.

See Notes to the request form

Box No. V DESIGNATION OF STATES *Mark the applicable check-boxes below; at least one must be marked.*

The following designations are hereby made under Rule 4.9(a):

Regional Patent

☒ AP **ARIPO Patent:** GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZM Zambia, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT *(if other kind of protection or treatment desired, specify on dotted line)* .....

☒ EA **Eurasian Patent:** AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT

☒ EP **European Patent:** AT Austria, BE Belgium, BG Bulgaria, CH & LI Switzerland and Liechtenstein, CY Cyprus, CZ Czech Republic, DE Germany, DK Denmark, EE Estonia, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, SK Slovakia, TR Turkey, and any other State which is a Contracting State of the European Patent Convention and of the PCT

☒ OA **OAPI Patent:** BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GQ Equatorial Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT *(if other kind of protection or treatment desired, specify on dotted line)* .....

National Patent *(if other kind of protection or treatment desired, specify on dotted line)*:

☒ AE United Arab Emirates .....
☒ AG Antigua and Barbuda
☒ AL Albania .....
☒ AM Armenia .....
☒ AT Austria .....
☒ AU Australia .....
☒ AZ Azerbaijan .....
☒ BA Bosnia and Herzegovina .....
☒ BB Barbados
☒ BG Bulgaria .....
☒ BR Brazil .....
☒ BY Belarus .....
☒ BZ Belize .....
☒ CA Canada
☒ CH & LI Switzerland and Liechtenstein
☒ CN China .....
☒ CO Colombia
☒ CR Costa Rica .....
☒ CU Cuba .....
☒ CZ Czech Republic .....
☒ DE Germany .....
☒ DK Denmark .....
☒ DM Dominica
☒ DZ Algeria .....
☒ EC Ecuador .....
☒ EE Estonia .....
☒ ES Spain .....
☒ FI Finland .....
☒ GB United Kingdom
☒ GD Grenada
☒ GE Georgia .....
☒ GH Ghana .....
☒ GM Gambia
☒ HR Croatia .....
☒ HU Hungary .....
☒ ID Indonesia
☒ IL Israel .....
☒ IN India .....
☒ IS Iceland
☒ JP Japan .....
☒ KE Kenya .....
☒ KG Kyrgyzstan .....
☒ KP Democratic People's Republic of Korea .....
☒ KR Republic of Korea .....
☒ KZ Kazakhstan .....
☒ LC Saint Lucia
☒ LK Sri Lanka
☒ LR Liberia
☒ LS Lesotho .....
☒ LT Lithuania
☒ LU Luxembourg
☒ LV Latvia
☒ MA Morocco .....
☒ MD Republic of Moldova .....
☒ MG Madagascar .....
☒ MK The former Yugoslav Republic of Macedonia .....
☒ MN Mongolia
☒ MW Malawi .....
☒ MX Mexico .....
☒ MZ Mozambique .....
☒ NO Norway
☒ NZ New Zealand .....
☒ OM Oman
☒ PH Philippines .....
☒ PL Poland .....
☒ PT Portugal .....
☒ RO Romania
☒ RU Russian Federation .....
☒ SD Sudan
☒ SE Sweden
☒ SG Singapore
☒ SI Slovenia .....
☒ SK Slovakia .....
☒ SL Sierra Leone .....
☒ TJ Tajikistan .....
☒ TM Turkmenistan .....
☒ TN Tunisia
☒ TR Turkey .....
☒ TT Trinidad and Tobago .....
☒ TZ United Republic of Tanzania
☒ UA Ukraine .....
☒ UG Uganda .....
☒ US United States of America .....
☒ UZ Uzbekistan .....
☒ VN Viet Nam .....
☒ YU Yugoslavia .....
☒ ZA South Africa .....
☒ ZM Zambia
☒ ZW Zimbabwe .....

Check-boxes below reserved for designating States which have become party to the PCT after issuance of this sheet:

☐ ..... ☐ ..... ☐ .....
☐ ..... ☐ ..... ☐ .....

Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. *(Confirmation (including fees) must reach the receiving Office within the 15-month time limit.)*

Box No. VI PRIORITY CLAIM

The priority of the following earlier application(s) is hereby claimed:

Filing date of earlier application *(day/month/year)*	Number of earlier application	Where earlier application is:		
		national application: country	regional application:* regional Office	international application: receiving Office
item (1)				
item (2)				
item (3)				
item (4)				
item (5)				

☐ Further priority claims are indicated in the Supplemental Box.

The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) *(only if the earlier application was filed with the Office which for the purposes of this international application is the receiving Office)* identified above as:

☐ all items ☐ item (1) ☐ item (2) ☐ item (3) ☐ item (4) ☐ item (5) ☐ other, see Supplemental Box

** Where the earlier application is an ARIPO application, indicate at least one country party to the Paris Convention for the Protection of Industrial Property or one Member of the World Trade Organization for which that earlier application was filed (Rule 4.10(b)(ii)):* ....

Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA) *(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used)*:

ISA / EP

Request to use results of earlier search; reference to that search *(if an earlier search has been carried out by or requested from the International Searching Authority)*:

Date *(day/month/year)* Number Country *(or regional Office)*

Box No. VIII DECLARATIONS

The following declarations are contained in Boxes Nos. VIII (i) to (v) *(mark the applicable check-boxes below and indicate in the right column the number of each type of declaration)*:		Number of declarations
☐ Box No. VIII (i)	Declaration as to the identity of the inventor :	
☒ Box No. VIII (ii)	Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent :	1
☐ Box No. VIII (iii)	Declaration as to the applicant's entitlement, as at the international filing date, to claim the priority of the earlier application :	
☒ Box No. VIII (iv)	Declaration of inventorship (only for the purposes of the designation of the United States of America) :	1
☐ Box No. VIII (v)	Declaration as to non-prejudicial disclosures or exceptions to lack of novelty :	

Box No. VIII (ii) DECLARATION: ENTITLEMENT TO APPLY FOR AND BE GRANTED A PATENT

The declaration must conform to the standardized wording provided for in Section 212; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (ii). If this Box is not used, this sheet should not be included in the request.

Declaration as to the applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51*bis*.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate:

In relation to the present international patent application

NOKIA CORPORATION is entitled to apply for and be granted a patent by virtue of the following:

(ii) NOKIA CORPORATION is entitled as employer of the inventors, Mikko Mäkipää, Akseli Anttila and Toni Kopra.

(ix) this designation is made for the purposes of:
(a) all designations [except the designation of the United States of America]

☐ This declaration is continued on the following sheet, "Continuation of Box No. VIII (ii)".

Box No. VIII (iv) DECLARATION: INVENTORSHIP (only for the purposes of the designation of the United States of America)

The declaration must conform to the following standardized wording provided for in Section 214; see Notes to Boxes Nos. VIII, VIII (i) to (v) (in general) and the specific Notes to Box No. VIII (iv). If this Box is not used, this sheet should not be included in the request.

Declaration of Inventorship (Rules 4.17(iv) and 51*bis*.1(a)(iv)) for the purposes of the designation of the United States of America:

I hereby declare that I believe I am the original, first and sole (if only one inventor is listed below) or joint (if more than one inventor is listed below) inventor of the subject matter which is claimed and for which a patent is sought.

This declaration is directed to the international application of which it forms a part (if filing declaration with application).

This declaration is directed to international application No. PCT/..... (if furnishing declaration pursuant to Rule 26*ter*).

I hereby declare that my residence, mailing address, and citizenship are as stated next to my name.

I hereby state that I have reviewed and understand the contents of the above-identified international application, including the claims of said application. I have identified in the request of said application, in compliance with PCT Rule 4.10, any claim to foreign priority, and I have identified below, under the heading "Prior Applications," by application number, country or Member of the World Trade Organization, day, month and year of filing, any application for a patent or inventor's certificate filed in a country other than the United States of America, including any PCT international application designating at least one country other than the United States of America, having a filing date before that of the application on which foreign priority is claimed.

Prior Applications: .....

.....

I hereby acknowledge the duty to disclose information that is known by me to be material to patentability as defined by 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the PCT international filing date of the continuation-in-part application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name: Mikko Mäkipää

Residence: Helsinki, Finland
(city and either US state, if applicable, or country)

Mailing Address: Airoranta 9 A
FIN-00830 Helsinki

Citizenship: FIN

Inventor's Signature: .....
(if not contained in the request, or if declaration is corrected or added under Rule 26*ter* after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: .....
(of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26*ter* after the filing of the international application)

Name: Akseli Anttila

Residence: Helsinki, Finland
(city and either US state, if applicable, or country)

Mailing Address: Pajalahdentie 6 B 25
FIN-00200 Helsinki

Citizenship: FIN

Inventor's Signature: .....
(if not contained in the request, or if declaration is corrected or added under Rule 26*ter* after the filing of the international application. The signature must be that of the inventor, not that of the agent)

Date: .....
(of signature which is not contained in the request, or of the declaration that is corrected or added under Rule 26*ter* after the filing of the international application)

☒ This declaration is continued on the following sheet, "Continuation of Box No. VIII (iv)".

See Notes to the request form

Continuation of Box No. VIII (i) to (v) DECLARATION

If the space is insufficient in any of Boxes Nos. VIII (i) to (v) to furnish all the information, including in the case where more than two inventors are to be named in Box No. VIII (iv), in such case, write "Continuation of Box No. VIII ..." (indicate the item number of the Box) and furnish the information in the same manner as required for the purposes of the Box in which the space was insufficient. If additional space is needed in respect of two or more declarations, a separate continuation box must be used for each such declaration. If this Box is not used, this sheet should not be included in the request.

Continuation of Box No. VIII (iv)

Name: Toni Kopra
Residence: Ojakkala, Finland
Mailing address: Sääritie 11 B 6, FIN-03250 Ojakkala
Citizenship: FIN

Inventor's signature:_____

Date:_____

Sheet No. 8

Box No. IX CHECK LIST; LANGUAGE OF FILING

This international application contains:

(a) the following number of sheets in paper form:

request (including declaration sheets)	:	8
description (excluding sequence listing part)	:	22
claims	:	8
abstract	:	1
drawings	:	4
Sub-total number of sheets	:	43
sequence listing part of description *(actual number of sheets if filed in paper form, whether or not also filed in computer readable form; see (b) below)*	:	
Total number of sheets	:	43

(b) sequence listing part of description filed in computer readable form

(i) ☐ only (under Section 801(a)(i))

(ii) ☐ in addition to being filed in paper form (under Section 801(a)(ii))

Type and number of carriers (diskette, CD-ROM, CD-R or other) on which the sequence listing part is contained *(additional copies to be indicated under item 9(ii), in right column)*: .....

This international application is accompanied by the following item(s) *(mark the applicable check-boxes below and indicate in right column the number of each item)*:

		Number of items
1. ☒ fee calculation sheet	:	1
2. ☐ original separate power of attorney	:	
3. ☐ original general power of attorney	:	
4. ☒ copy of general power of attorney; reference number, if any: 02/002	:	1
5. ☐ statement explaining lack of signature	:	
6. ☐ priority document(s) identified in Box No. VI as item(s):	:	
7. ☐ translation of international application into *(language)*:	:	
8. ☐ separate indications concerning deposited microorganism or other biological material	:	
9. ☐ sequence listing in computer readable form (indicate also type and number of carriers (diskette, CD-ROM, CD-R or other))		
(i) ☐ copy submitted for the purposes of international search under Rule 13*ter* only (and not as part of the international application)	:	
(ii) ☐ *(only where check-box (b)(i) or (b)(ii) is marked in left column)* additional copies including, where applicable, the copy for the purposes of international search under Rule 13*ter*	:	
(iii) ☐ together with relevant statement as to the identity of the copy or copies with the sequence listing part mentioned in left column	:	
10. ☐ other *(specify)*:	:	

Figure of the drawings which should accompany the abstract:

Language of filing of the international application: English

Box No. X SIGNATURE OF APPLICANT, AGENT OR COMMON REPRESENTATIVE

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

1 July 2002

Christian Hauge
AWAPATENT A/S

For receiving Office use only

1. Date of actual receipt of the purported international application: 01 JULY 2002 (01.07.02)

2. Drawings:
☐ received:
☐ not received:

3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:

4. Date of timely receipt of the required corrections under PCT Article 11(2):

5. International Searching Authority (if two or more are competent): ISA /

6. ☒ Transmittal of search copy delayed until search fee is paid

For International Bureau use only

Date of receipt of the record copy by the International Bureau:

A SYSTEM AND METHOD FOR DELIVERING REPRESENTATIVE MEDIA OBJECTS OF A BROADCAST MEDIA STREAM TO A TERMINAL

Field of invention

This invention relates to a system and method for delivering media objects associated with a broadcasted media stream to one or more terminals.

Background of invention

Media streams such as a radio or television transmissions, videos, or DVDs are generally controlled and presented by a communication system such as a radio or television receiver, a video recorder or DVD player. A user may control the presentation of the media stream by directly operating the communication device so as to select a particular media stream or particular sequence of the particular media stream. The known media streams and known communication devices are satisfactory in the presentation of a media stream in a sequential fashion. However, when it comes to commercial utilisation of the media stream the known communication systems may be further improved in order to serve multi-technical communication systems, i.e. combinations of communication systems, and to fulfil future customer demands for versatility of their communication devices and media stream products.

Summary of the invention

An object of the present invention is to provide a system and method for providing media objects of a media stream, which media objects are created for and made available to a user of a communication system during a primary media stream experience.

A further object of the present invention is to capture a frame of a media stream of a broadcast or video transmission to a terminal.

A particular advantage of the present invention is provision of editing capability for editing a frame of a media stream so as to personalise the frame.

A particular feature of the present invention relates to the provision of a "capture of the moment" or "record" hot key in a terminal enabling a user to download a frame from a plurality of frames of a media stream.

The above objects, advantage and feature together with numerous further objects, advantages and features, which will be evident from below detailed description, is accomplished by a solution in accordance to a first aspect of the present invention by a system for delivering a media object to one or more terminals, which media object is associated with a media stream broadcasted to one or more media stream receivers, said system comprising:

(a) a broadcasting network for connecting to said one or more media stream receivers;

(b) a first communications network for connecting to said one or more terminals; and

(c) a communication device connecting to said broadcasting network and broadcasting said media stream to said one or more media stream receivers, and connecting to said

communications network and communicating said media object to said one or more terminals.

The term "one or more" should in this context be construed as a, an, at least one, at least a single.

The media stream according to the first aspect of the present invention may comprise a television and/or radio transmitted show, drama, movie, sports game, news, or any combination thereof. Thus any type of television and/or radio transmission may constitute a media stream.

In addition, the media object may comprise a text, a picture, a series of pictures, a video, a series of videos, an audio recording, a series of audio recordings, or any combination thereof. Hence the media object may comprise any related or unrelated information in regards to the media stream and may be presented in any type of readable format.

The terminal according to the first aspect of the present invention may comprise a phone, a cellular or mobile phone, a personal computer, a television, a set top box, a multimedia terminal, a personal office assistant or any combination thereof, and the one or more media stream receivers may comprise a set top box, multimedia terminal, television receiver, television, radio receiver or any combination thereof.

The communication device according to the first aspect of the present invention may broadcast to the one or more media stream receivers by a cable television network, a satellite television network, a radio frequency television network, a telephone network, a powerline network, a radio network or any

combination thereof. Thus any type of network may generally be applied for broadcasting of the media stream, i.e. various types of providers capable of transmitting the media stream to the receivers may be used. This provides for a system, which is very versatile.

The communication device according to the first aspect of the present invention may be adapted to transmit digitally coded communication such as digital video broadcasting and/or digital audio broadcasting. The digitally coded signals provide better transmission quality and enables the communication device to forward additional information to a receiver.

The first communications network according to the first aspect of the present invention may comprise a telephone wire network, a cable television network, a powerline network, a computer network, a wireless telephone network, or any combination thereof. The communication between the communication device and the one or more terminals may utilise a wide variety of network types and wide variety of combinations of network types depending upon which provider is selected.

The communication device according to the first aspect of the present invention may comprise a broadcasting unit for broadcasting the media stream to the one or more media stream receivers, a management unit for providing the media object to the one or more terminals, and a second communications network for interconnecting the broadcasting unit and the management unit. The broadcasting unit may comprise a marker for generating a media stream identification tag associated to the media stream, which media stream identification tag may comprise information regarding duration of the media stream, lapsed time of the media stream, broadcasting schedule for the

media stream, broadcasting channel for the media steam, or any combination thereof. By tagging the media stream with an identification mark any specific media objects relating to the media stream may be connected to the media stream in the communication device so as to provide a tool for managing the media objects.

Further, the broadcasting unit may be adapted to perform a continuous communication of data regarding the media stream information tag, an updating communication of revision of specific data regarding the media stream information tag, a communication based on schedule of the media stream, or any combination thereof. Any of the above reference communications are advantageous since they all serve a specific purpose. Continuous communication enables the broadcast unit to continuously correct for changes in the broadcast scheduling of the media stream and to continuously create new media objects relating to the media stream. Updating communication similarly provides the broadcasting unit with the possibility to adjust for changes in the broadcast scheduling of the media stream. Finally, the scheduled communication such as predefining intervals in which the broadcast unit may communicate with the management unit provides a well structured and coordinated communication form.

The management unit according to the first aspect of the present invention may comprise an application program interface for receiving the media object, a database for storing the media object and the media stream identification tag, a real time publishing interface for enabling real time publishing of the media object, and a user interface for providing the one or more terminals access to select the media object stored in the database through the first communications network. The various

interfaces may be implemented in a plurality of format so as to support a wide range of communication standards.

The user interface may be adapted to respond to a request from the one or more terminals and to generate a media object list of media objects, which are accessible for the one or more terminals.

The second communications network according to the first aspect of the present invention may comprise local area network, metropolitan area network; wide area network, or inter-network such as the Internet, a dedicated communication line, or any combination thereof. The first aspect of the present invention may therefore be implemented for any particular network being wireless or hardwire.

The system according to the first aspect of the present invention may further comprise a billing unit for managing billing transactions for the one or more terminals' requests for the media object and for generating invoices to the one or more terminals in accordance with the billing transactions. The transactions may be recorded so as to present invoices to users of the system.

In addition, the system may further comprise a third communications network for interconnecting the billing unit and the management unit and a fourth communications network for interconnecting the billing unit and the one or more terminals. The third and fourth communications network comprises local area network, metropolitan area network, wide area network, or inter-network such as the Internet, a dedicated communication line, a telephone wire network, a cable television network, a powerline network, a computer network, a wireless telephone

network, or any combination thereof. As described above the network type is not limited since the system may be incorporating into any known network types.

The term broadcasting network is to be construed as a cable TV network, a satellite TV network, a radio frequency TV network, a radio cable or terrestrial network, and/or any TV or radio network utilising digital transmission techniques.

The communication device according to first aspect of the present invention may broadcast the media stream and the media object through the broadcasting network and the one or more media stream receivers may connect to the first communications network and communicate the media object to the one or more terminals. The media object may be broadcast through a digital television network as part of the media stream such as through super text TV. A digital receiver such as a set-top box may store the media objects and communicate them subsequently to the one or more terminals.

The above objects, advantages and features together with numerous further objects, advantages and features which will be evident from below detailed description is accomplished by a solution in accordance to a second aspect of the present invention by a method for delivering a media object to one or more terminals, which media object is associated with a media stream broadcasted to one or more media stream receivers, and said method comprising:

(a) associating said media object with said media stream by means of a communication device;

(b) broadcasting said media stream to said one or more media stream receivers through a broadcasting network by means of said communication device; and

(c) communicating said media object to a requesting terminal of said one or more terminals through a communications network by means of said communication device.

The method according to the second aspect of the present invention may further comprise defining a parameter for the media object by means of the communication device and the parameter defining a media object format such as audio, video, image, or any combination thereof, a technical format, an alternative task such as full view or close-up, a terminal requirement, or any combination thereof. By defining the parameter the method provides for an effective means for selecting those media objects which are readable to a specific terminal.

The method according to the second aspect of the present invention may further comprise packaging a set of media objects associated with the media stream and publishing the set of media objects to the one or more terminals by means of the communication device. The packaging may comprise linking the media object to the media stream so that the media object is attached to a broadcasting time line of the media stream and defining the availability of the media object in accordance with the broadcasting time line of the media stream. Obviously, some connection between the media stream and the media objects is required in order to manage a media object relative to a terminal and relative to a media stream.

The packaging may further comprise defining a media object based on a key moment of the media stream as an elapsed time from the start of the media stream, defining the media object's availability prior, during and after broadcast of the media stream, defining an additional time period during which the

media object's availability is announced but not available for transfer, or any combination thereof. Any desired part of a media stream may be utilised for the creation of a media object associated with the media stream.

The method according to the second aspect of the present invention may further comprise managing the set of media objects by means of the communication device, and the managing comprises controlling availability of each media object of the set of media objects in accordance with the broadcast time line for the media stream. The availability of the media object is controlled so as to provide a constant high level of current interest in the media objects. This motivates a user to further use the method for downloading more media objects.

The method according to the second aspect of the present invention may further comprise providing the one or more terminals access to the available media objects and enabling a requesting terminal of the one or more terminals to transfer any specific available media object. The providing may comprise presenting a user interface to the one or more terminals, which user interface lists the set of media objects. The user of a terminal may thus select from a set of media objects associated with any particular media stream. The number of media objects in a set may vary in accordance with the popularity of the media stream.

The method according to the second aspect of the present invention may further comprise generating a media object by means of the communication device in response to a request from the one or more terminals. The request is accomplished by a user of a terminal depressing a hotkey for capturing a key moment of the media stream. The user interface presents a

specific list for a specific terminal, which specific list comprises a media object, which is readable by the specific terminal. The user of a terminal may thus by depressing a button on his terminal initiate the creation of a media object to a media screen. In this way the user may select any frame or sound he desires from the media stream.

The method according to the second aspect of the present invention may further comprise purchasing the media object from the communication device by means of the one or more terminals, by purchasing the media object the media object is transferred to the one or more terminals. Since media streams may be subject to royalties the user of the method should be at least self supporting or part of a business.

The method according to the second aspect of the present invention may further comprise recording and processing of the transfer of the media object to the one or more terminals by means of a transaction processing device. Payment of the utilised services may be monitored in a wide variety of ways thus the method opens the possibility for implementation in many circumstances.

The method according to the second aspect of the present invention may further comprise identifying the media object format by means of the one or more terminals, the identifying revealing information such as supporting application needed, additional rights pertaining to the media object, forwarding limitations associated with the media object, or any combination thereof.

The method according to the second aspect of the present invention may further comprise providing privileges associated

with the media object and with the one or more terminals. The privileges enable the one or more terminals to copy or forward the media object in accordance with each of the one or more terminals' number of purchases of said media object. In addition or alternatively, the may privileges disable the one or more terminals to copy or forward said media object. Further in addition or alternatively, the privileges may disable the one or more terminals to copy or forward more than the one or more terminals' number of purchases. It is important to monitor and restrict the user of the terminals in exploiting the media objects beyond the rights pertained thereto. Hence the method according to the second aspect of the present invention may ensure against this type of exploitation. The privileges may be incorporated in the system according to the first aspect of the present invention.

The method according to the second aspect of the present invention may further incorporate any features of the system according to the first aspect of the present invention.

Brief description of the drawings

The above, as well as additional objects, features and advantages of the present invention, will be better understood through the following illustrative and non-limiting detailed description of preferred embodiments of the present invention, with reference to the appended drawings, wherein:

Figure 1 shows a system according to a first embodiment of the present invention;

Figure 2 shows an example of the methodology used by the system according to the first embodiment of the present invention;

Figure 3 shows an overall view of key components of the system according to the first embodiment of the present invention; and

Figure 4 shows a flow chart of method according to a second embodiment of the present invention.

Detailed description of preferred embodiments

In the following description of the various embodiments, reference is made to the accompanying drawings which form a part hereof, and in which is shown by way of illustration various embodiments in which the invention may be practiced. It is to be understood that other embodiments may be utilized and structural and functional modifications may be made without departing from the scope of the present invention.

A communication system according to a first embodiment of the present invention is shown in figure 1 as designated in its entirety by reference numeral 10.

The communication system 10 enables a user of a terminal 12, such as a cell or mobile phone, during a media stream broadcast to capture a media object. A media object should in this context be construed as a frame of a media stream, a series of frames of a media stream, a video sequence of a media stream, a part of a sound track of a media stream, or any combination thereof.

The communication system 10 further comprises a display 14 for displaying a broadcasted media stream 16. The display 14 is communicating with a receiver 18, such as an external or internal digital set-top box, a digital receiver, or an

analogue receiver. The receiver 18 may in an alternative embodiment of the present invention further communicate with a video recorder, a DVD player, a radio receiver, a sound amplifier, or any combination thereof.

The media stream 16 is broadcasted through a broadcasting network such as a cable television network, a satellite television network, a terrestrial television network, a telephone network, a powerline network, a cable or terrestrial radio network or any combination thereof.

The terminal 12 may comprise a hot key 20 enabling a user of the terminal 12 to select, by depressing the hot key 20, a media object 24 associated with the media stream 16. Thus, a user of the terminal 12 watching a television show may during the show depress the hot key 20 and thereby request a media object to be transferred through a communications network, such as a wired or wireless telecommunication network. In addition, the user of the terminal 12 may select any part of the media stream 16 such as any particular audio tracks from the media stream 16.

The communication system 10 enables turning existing mass media properties into further digital merchandise by utilising the familiarity and appeal of characters, events and themes songs of particular television shows, movies or radio programs for media objects to be incorporated into a user's terminal 12.

The media object 24 is created as a representation of a particular scene of a television show, however, the media object 24 may be any key moments of television shows, movies or radio programs such as high points of the plot line (Ross and Rachel's first kiss in the television series "friends"), a

clever punch line in a television show, a particular comment by a character in a movie or television show, a goal scored in any sports game. The media object 24 may be a video clip, a picture, a series of pictures, animations, soundtracks or the like.

The media object 24 when transferred onto the terminal 12 may be used as any personal terminal enhancement such as background images, ringing tones, messages, or logos. The terminal 12 comprises an editor for enabling a user of the terminal 12 to edit the media object 24 in accordance with any personal preferences. The terminal 12 further comprises a memory for storing of the media object 24 so that the user may further communicate the media object 24 per se or an edited version of the media object 24 to other terminals through a wireless telecommunications network and/or utilising a multimedia messaging service.

An example of the methodology is shown in figure 2. A communication system designated in its entirety by reference numeral 40 comprises a television set 42 having a monitor 44 and a receiver 46 and displaying a specific media stream 48, and comprises a communication device 47 for broadcasting the specific media stream to the receiver 46 and for providing media objects related to the specific media stream to any number of terminals.

A first user is watching the media stream 48 on the television set 42 and desires to transfer a media object 50 associated with the media stream 48 onto a first terminal 52, which transfer is shown as an arrow 54. The first user captures this media object 50 by using the first terminal 52 and pressing the "capture the moment" hot key 56. The first user may then want

to share the media object 50 with a second user of a second terminal 58 and hence in accordance with a set of privileges associated with the first user communicate the media object 50 by utilising for example a multimedia messaging service(MMS), which communication is shown in figure 2 as an arrow 60. The second user of the second terminal 58 may subsequently be using the media object for example as a personal background on his/her terminal or in accordance with a set of privileges associated with the second user distribute it further by sending for example a new e-mail with the media object attached with the e-mail transmission.

The utilisation of the multimedia messaging service for forwarding or sharing the media object may be incorporated in the terminal as a application program presenting a menu enabling the user to activate a transfer of the media object. In addition, the application program may open a recipient window to be filled by the user of the terminal prior to activating a transfer of the media object and in this process offering the user the use of the address book of the terminal. Further, the application program may comprise a editing facility enabling the user of the terminal to edit in the media object prior to activating the transfer of the media object. The editing facility the user may add comments to the media objects. Furthermore, the application program may enable the introduction of an advertisement to be associated and forwarded with the media object. This renders it possible to have messages partly of fully financed by the advertiser who wants to sponsor the media object.

Both the first and second terminal 52 and 58 provide the first and second user with the possibility to edit the media object

50 so as to personalize a message in conjunction with the transmission of the media object from one terminal to the next.

Figure 3 shows an overall view of the key components of the communication system 10. The communication system 10 comprises a broadcast unit 80 for broadcasting a media stream to one or more television receivers in any given region 82. The broadcast of the media stream is shown as a first arrow 84 and may be accomplished by wireless, cable or satellite transmission. The region 82 may be defined by a cable television network or a plurality of individual television receivers.

The broadcast unit 80 comprises a marker 86 for continuously generating an associated media stream identification tag to a specific media stream to be aired on a specific transmission date and time. The tag may contain further information regarding duration of the specific media stream, lapsed time of the specific media stream and transmission channel.

The broadcast unit 80 communicates the associated media stream identification tag to a management unit 88 through a first communications network 90 such as local area network, metropolitan area network, wide area network, or inter-network such as the Internet, or alternatively on a dedicated line. The management unit 88 comprises an application program interface 92 for receiving one or more media objects 94 associated with specific media stream identification tags and connects to a database 96 for storing the one or more media objects 94 together with the associated media stream identification tag.

The broadcast unit 80 may perform a continuous transmission of data regarding a media stream information tag, an updating transmission of revision of specific data regarding a media

stream information tag, or a transmission based on a scheduled program listing.

Furthermore, the management unit 88 comprises a real time publishing interface 98 enabling real time publishing of media objects. That is, enabling publishing of the one or more media objects 94 during the broadcast unit's broadcast of an associated media stream.

In addition, the management unit 88 comprises an interface processor 100 for providing one or more terminals 102 access to the one or more media objects 94 stored in the database 96 through a wireless communications network 104. The interface processor 100 responds to a call from one or more of the terminals 102 and generates a media object list of the one or more media objects that are accessible for the specific one or more terminals 102 at that specific date and time. The access of the one or more media objects 94 may thus be limited to a specific time period so as to create media objects which are dependent on the transmission of a media stream.

The management unit 88 further communicates with a billing device 106 through a second communications network 108, which may be any of the above types mentioned with reference to the first communications network 90, it may in fact be the same communications network. The billing device 106 manages transactions of media objects, accounts of the one or more terminals 102, and generates invoices. The billing device 106 may further communicate with the one or more terminals 102 through a third communications network 110, which as before may be any of the above types mentioned with reference to the first and second communications network 90 and 108 in combination with a wireless communications network.

In an alternative embodiment of the management unit 88 communicates the media objects through the second communication network 90 to the broadcast unit 80, which communicates the media objects to the one or more television receivers or set-top box in the region 82 together with the media stream. The media objects may be communicated as a super text TV object. The one or more television receivers communicate the media objects to the terminals through a wireless communications network 105.

Figure 4 shows a flow chart of a method according to a second embodiment of the present invention, which method is designated in its entirety by reference numeral 120. The method 120 comprises a start 122 for performing initialisation of the method 120. The start 122 involves establishing an interface for media object generating devices, such as the broadcast unit 80 described with reference to figure 3, and an interface for a terminal, such as the one or more terminals 102 described with reference to figure 3.

The media object generating devices utilise a management unit, such as described with reference to figure 3 as the management unit 88, for establishing media objects 124 on or under the control of the management unit. The media object generating devices use an original media stream content for creating the media objects associated with said original media stream. The media objects may be key frames or key sounds, which define a special moment of the media stream. The media objects are created prior to broadcasting the media stream, which broadcasting may be performed one or more times in one or more regions or in one ore more television network. However, the media objects may, in addition, be created during a broadcast of an associated media stream, for example during live sports

broadcasts, which enable a terminal to select representative frames of the media stream (sports broadcast) such as a goal scored during a soccer match.

The media objects may be implemented in any format such as in Synchronized Multimedia Integration Language(SMIL) format, any JPEG format, any Graphics Interchange Format (GIF), audio or digital audio formats, Audio IFF, Computer Graphics Metafile, TIFF, BIFF, bmp, Clear, FITS, NFF, OFF, PCX, PNG, TGA, XBM, mod, any Moving Picture Experts Group (MPEG) format, Musical Instrument Digital Interface, PICT, PNG, Portable Document Format (PDF), Portable Network Graphics, Portable Pixmap, progressive coding, Quicktime, RIFF, Self Extracting Archive, sequential coding; server-parsed HTML, sprite, Tagged Image File Format, targa, Targa Graphics Adaptor, thumbnail, wav, WebCGM, wireless bitmap, xpm or a different frame rate video.

In an alternative embodiment of the present invention the media objects are created automatically or semi-automatically.

Defining the parameters 126 is achieved by the management unit. The parameters of the media objects may define media object type (audio, video or image), technical format (as described above e.g. JPEG), alternative tasks (full view, close-up), terminal requirements (e.g. Nokia 6100 series). In addition, textual matter or preview versions may be included in the media objects.

When the management unit has received all necessary information regarding media objects associated with a specific media stream the management unit packages the media objects as a set of media objects during packaging 128. The packaging 128 comprises associating the media objects to a specific media stream so

that each media object are attached to the time line of the media stream by defining the availability of the media object in accordance with the time line of the media stream. This may be achieved by defining the key moment as elapsed time for the start of the media stream (e.g. media stream title, media object identification tag, and media object title - second goal), defining the media object's availability prior, during and after broadcast of the media stream, as well as defining an additional time period during which the availability of a media object is announced but not available for transfer (e.g. advertised prior to broadcast).

When the packaging 128 is accomplished the management unit initiates a publishing 130 of the media object or the set of media objects so that the media object or set of media objects are associated with the specific media stream.

During the media stream broadcast the management unit controls the availability of the media object or the set of media objects by managing 132 availability in accordance with the pre-defined timing and the progression of the media stream broadcast, while taking in to account delays in the start of the broadcast and commercial breaks.

In conjunction with controlling availability of the media object or set of media objects the management unit enables one or more terminals to access the available media objects by providing 134 the requesting one or more terminals to transfer any particular available media object.

The providing step 134 further comprises presenting a user interface to the one or more terminals, which user interface lists the set of media objects, which may be generated by the

managing device as a response to a request from the one or more terminals such as accomplished by a user of a terminal depressing a hotkey for capturing a media stream moment, as described with reference to figure 3. By depressing the hotkey the user navigates to a web page or starts a particular application. The user interface presents a specific list for a specific terminal, which specific list comprises media objects, which are readable by said specific terminal. Hence the user interface is dynamic in relation to the one or more terminals. For example, if the management unit knows that the specific terminal only supports PNG images the user interface does not present available GIF images.

Furthermore, the list may comprise presently unavailable media objects that will be available in the future and/or previously available media objects, which presently are unavailable. Alternatively, if only one media object is available at any time the user interface may direct the user to directly transfer the media object omitting listing alternatives.

The user/users of the one or more terminals are subsequently asked whether a purchase of a media object is requested during a purchase? step 136. The media object may have a price, which subsequently to the user transferring the media object is charged to the user. If the user does not wish to purchase a media object, the method 120 is terminated in termination step 138.

On the other hand if the user wishes to purchase a media object of the list of media objects the method 120 moves to transfer the chosen media object during a transfer step 140. When the chosen media object is transferred to the user the transaction is recorded and processed by a separate transaction processing

device such as the billing device as described with reference to figure 3. The transaction may be accomplished in a wide variety of ways such as micro-payment, charging against user account or operating billing.

When the media object is transferred to the user's terminal it may be identified by the terminal by its format or supporting application (e.g. through MIME type mapping). This initial identification may further reveal which type of potential use is allowed. That is, additional rights and limitations may be attached to the media object (e.g. the user's ability to forward the media object to others may be limited). Hence, when a specific user of a terminal purchases a certain media object, which is transferred to the terminal, the media object includes privileges describing rights and limitations in use or copying of the media object.

Claims

1. A system for delivering a media object to one or more terminals, which media object is associated with a media stream broadcasted to one or more media stream receivers, said system comprising:

(a) a broadcasting network for connecting to said one or more media stream receivers;

(b) a first communications network for connecting to said one or more terminals; and

(c) a communication device connecting to said broadcasting network and broadcasting said media stream to said one or more media stream receivers, and connecting to said communications network and communicating said media object to said one or more terminals.

2. A system according to claim 1, wherein said media stream comprises a television and/or radio transmitted show, drama, movie, sports game, news, or any combination thereof.

3. A system according to claims 1 or 2, wherein said media object comprises a text, a picture, a series of pictures, a video, a series of videos, an audio recording, a series of audio recordings, or any combination thereof.

4. A system according to any of claims 1 to 3, wherein said terminal comprises a phone, a cellular or mobile phone, a personal computer, television, a set top box, a multimedia terminal, a personal office assistant or any combination thereof.

5. A system according to any of claims 1 to 4, wherein said one or more media stream receivers comprise a set top box, multimedia terminal, television receiver, television, radio receiver or any combination thereof.

6. A system according to any of claims 1 to 5, wherein said communication device broadcasts to said one or more media stream receivers by a cable television network, a satellite television network, a radio frequency television network, a telephone network, a powerline network, a radio network or any combination thereof.

7. A system according to claim 6, wherein said communication device is adapted to transmit digitally coded communication such as digital video broadcasting and/or digital audio broadcasting.

8. A system according to any of claims 1 to 7, wherein said first communications network comprises a telephone wire network, a cable television network, a powerline network, a computer network, a wireless telephone network, or any combination thereof.

9. A system according to any of claims 1 to 8, wherein said communication device comprising a broadcasting unit for broadcasting said media stream to said one or more media stream receivers, a management unit for providing said media object to said one or more terminals, and a second communications network for interconnecting said broadcasting unit and said management unit.

10. A system according to claim 9, wherein said broadcasting unit comprises a marker for generating a media stream

identification tag associated to said media stream, which media stream identification tag comprises information regarding duration of said media stream, lapsed time of said media stream, broadcasting schedule for said media stream, broadcasting channel for said media stream, or any combination thereof.

11. A system according to claims 9 or 10, wherein said broadcasting unit is adapted to perform a continuous communication of data regarding said media stream information tag, an updating communication of revision of specific data regarding said media stream information tag, a communication based on schedule of said media stream, or any combination thereof.

12. A system according to any of claims 9 to 11, wherein said management unit comprises an application program interface for receiving said media object, a database for storing said media object and said media stream identification tag, a real time publishing interface for enabling real time publishing of said media object, and a user interface for providing said one or more terminals access to select said media object stored in said database through said first communications network.

13. A system according to claim 12, wherein said user interface is adapted to respond to a request from said one or more terminals and to generate a media object list of media objects, which are accessible for said one or more terminals.

14. A system according to any of claims 9 to 13, wherein said second communications network comprises local area network, metropolitan area network, wide area network, or inter-network

such as the Internet, a dedicated communication line, or any combination thereof.

15. A system according to any of claims 1 to 14 further comprises a billing unit for managing billing transactions for said one or more terminals' requests for said media object and for generating invoices to said one or more terminals in accordance with said billing transactions.

16. A system according to claim 17 further comprises a third communications network for interconnecting said billing unit and said management unit and a fourth communications network for interconnecting said billing unit and said one or more terminals.

17. A system according to claim 16, wherein said third and fourth communications network comprises local area network, metropolitan area network, wide area network, or inter-network such as the Internet, a dedicated communication line, a telephone wire network, a cable television network, a powerline network, a computer network, a wireless telephone network, or any combination thereof.

18. A system according to any of claims 1 to 17, wherein said communication device broadcasting said media stream and said media object through said broadcasting network and wherein said one or more media stream receivers connecting to said first communications network and communicating said media object to said one or more terminals.

19. A method for delivering a media object to one or more terminals, which media object is associated with a media stream

broadcasted to one or more media stream receivers, and said method comprising:

(a) associating said media object with said media stream by means of a communication device;

(b) broadcasting said media stream to said one or more media stream receivers through a broadcasting network by means of said communication device; and

(c) communicating said media object to a requesting terminal of said one or more terminals through a communications network by means of said communication device.

20. A method according to claim 19 further comprises defining a parameter for said media object by means of said communication device and said parameter defining a media object format such as audio, video, image, or any combination thereof, a technical format, an alternative task such as full view or close-up, a terminal requirement, or any combination thereof.

21. A method according to claims 19 or 20 further comprises packaging a set of media objects associated with said media stream and publishing said set of media objects to said one or more terminals by means of said communication device.

22. A method according to claim 21, wherein said packaging comprises linking said media object to said media stream so that said media object is attached to a broadcasting time line of said media stream and defining the availability of said media object in accordance with said broadcasting time line of said media stream.

23. A method according to claims 21 or 22, wherein said packaging further comprises defining a media object based on a

key moment of said media stream as an elapsed time from the start of the media stream, defining the media object's availability prior, during and after broadcast of said media stream, defining an additional time period during which said media object's availability is announced but not available for transfer, or any combination thereof.

24. A method according to any of claims 19 to 23 further comprises managing said set of media objects by means of said communication device, and said managing comprises controlling availability of each media object of said set of media objects in accordance with said broadcast time line for said media stream.

25. A method according to claim 24 further comprises providing said one or more terminals access to said available media objects and enabling a requesting terminal of said one or more terminals to transfer any specific available media object.

26. A method according to claim 25, wherein said providing comprises presenting an interface to said one or more terminals, which interface lists said set of media objects.

27. A method according to any of claims 19 to 26 further comprises generating a media object by means of said communication device in response to a request from said one or more terminals.

28. A method according to claim 27, wherein said request is accomplished by a user of a terminal depressing a hotkey for capturing a key moment of said media stream.

29. A method according to any of claims 26 to 28, wherein said interface presents a specific list for a specific terminal, which specific list comprises a media object, which is readable by said specific terminal.

30. A method according to any of claims 19 to 29 further comprises purchasing said media object from said communication device by means of said one or more terminals, by purchasing said media object said media object is transferred to said one or more terminals.

31. A method according to claim 30 further comprises recording and processing of said transfer of said media object to said one or more terminals by means of a transaction processing device.

32. A method according to claims 30 or 31 further comprises identifying said media object format by means of said one or more terminals, said identifying revealing information such as supporting application needed, additional rights pertaining to said media object, forwarding limitations associated with said media object, or any combination thereof.

33. A method according to any of claims 19 to 32, further comprising providing privileges associated with said media object and with said one or more terminals, which privileges enable said one or more terminals to copy or forward said media object in accordance with each of said one or more terminals' number of purchases of said media object and/or which privileges disable said one or more terminals to copy or forward said media object and/or which privileges disable said one or more terminals to copy or forward more than said one or more terminals' number of purchases.

34. A method according to any of claims 19 to 33, wherein said method further incorporates any features of the system according to any claims 1 to 18.

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Abstract

This invention relates to a system and method for delivering a media object associated with a media stream broadcasted from a communication device to a broadcast receiving unit such as a personal computer, a multimedia terminal, a television receiver, a television, or any type of radio receiver, to a terminal such as a phone, a cellular or mobile phone, a personal computer, a television, or a personal office assistant (figure 1).

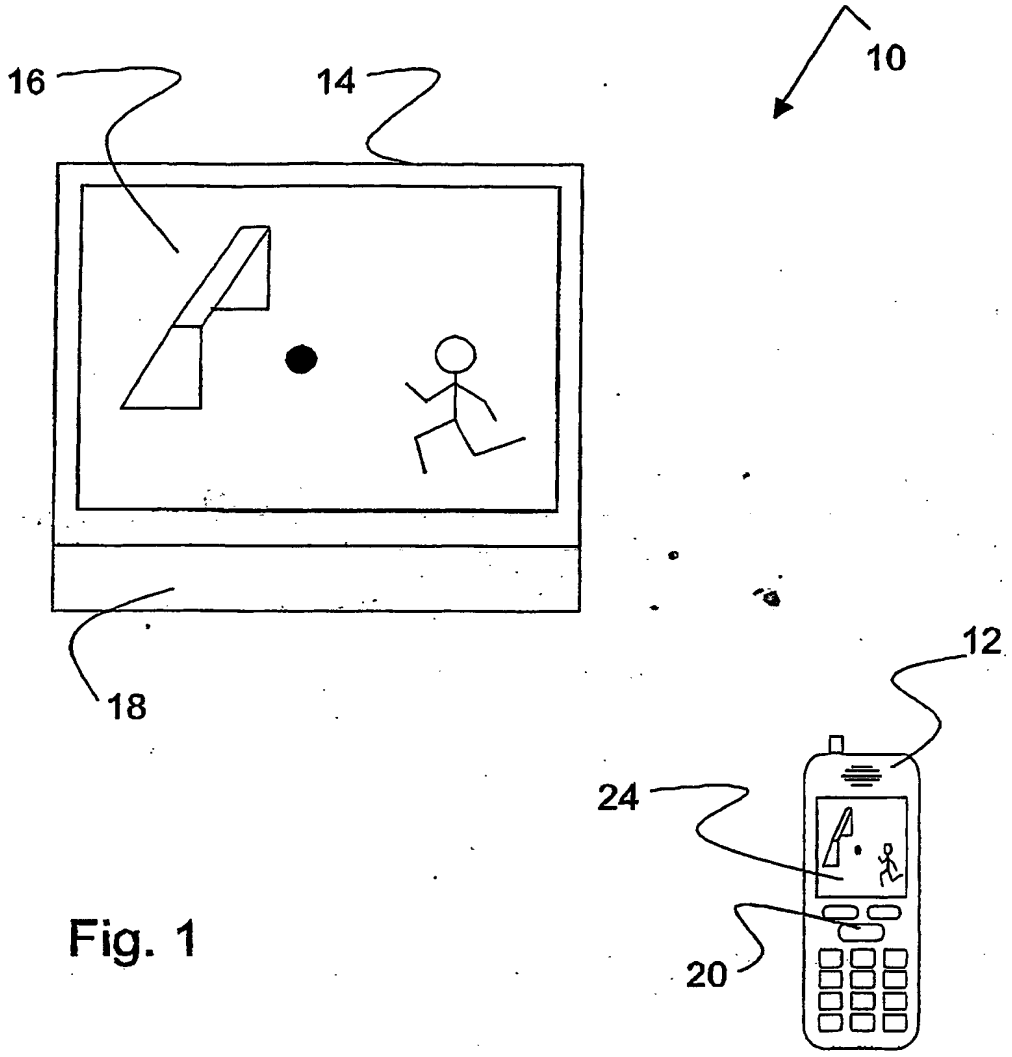

Fig. 1

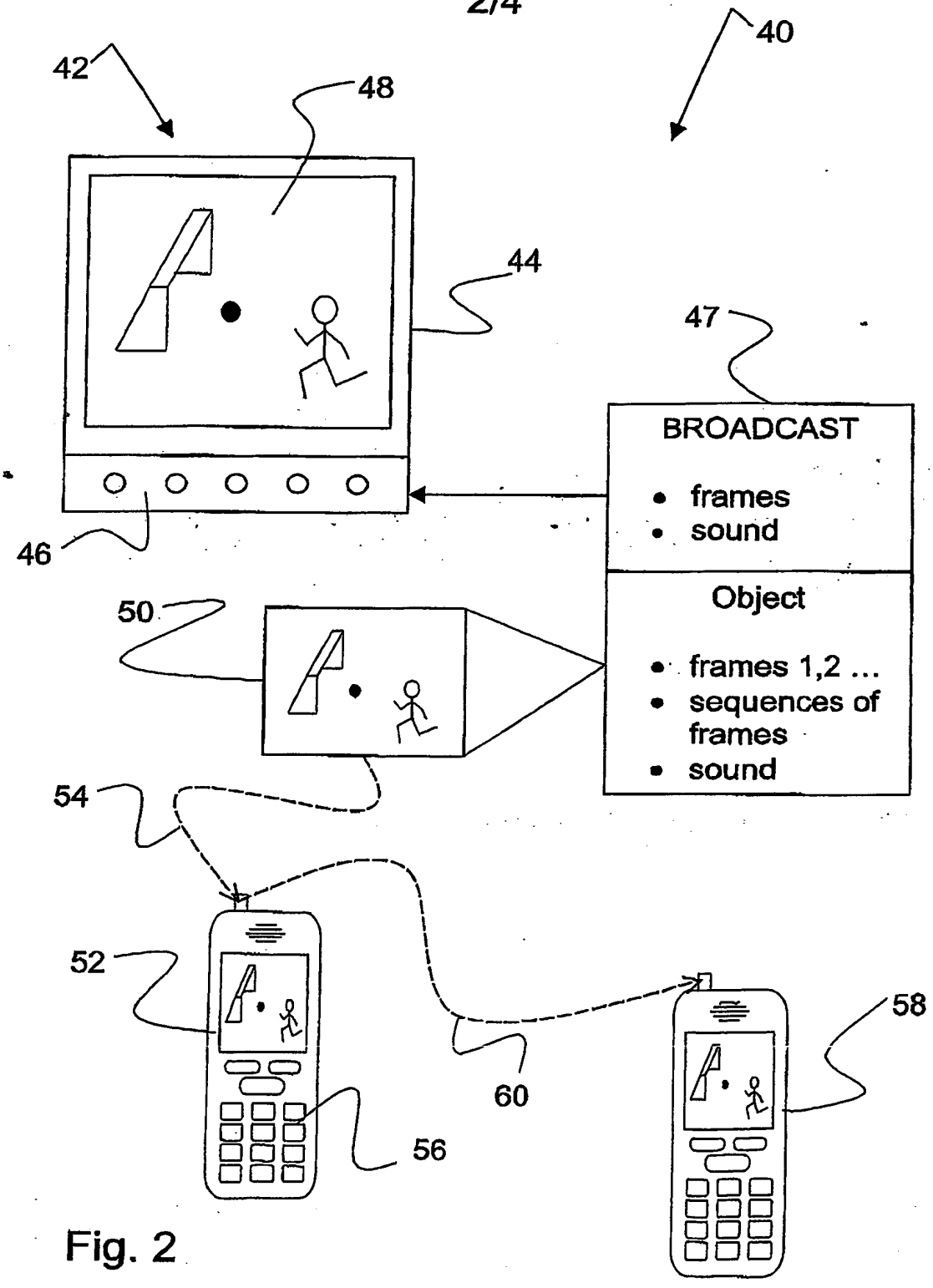
42
48
40
44
47
BROADCAST
• frames
• sound
46
50
Object
• frames 1,2 ...
• sequences of frames
• sound
54
52
58
60
56

Fig. 2

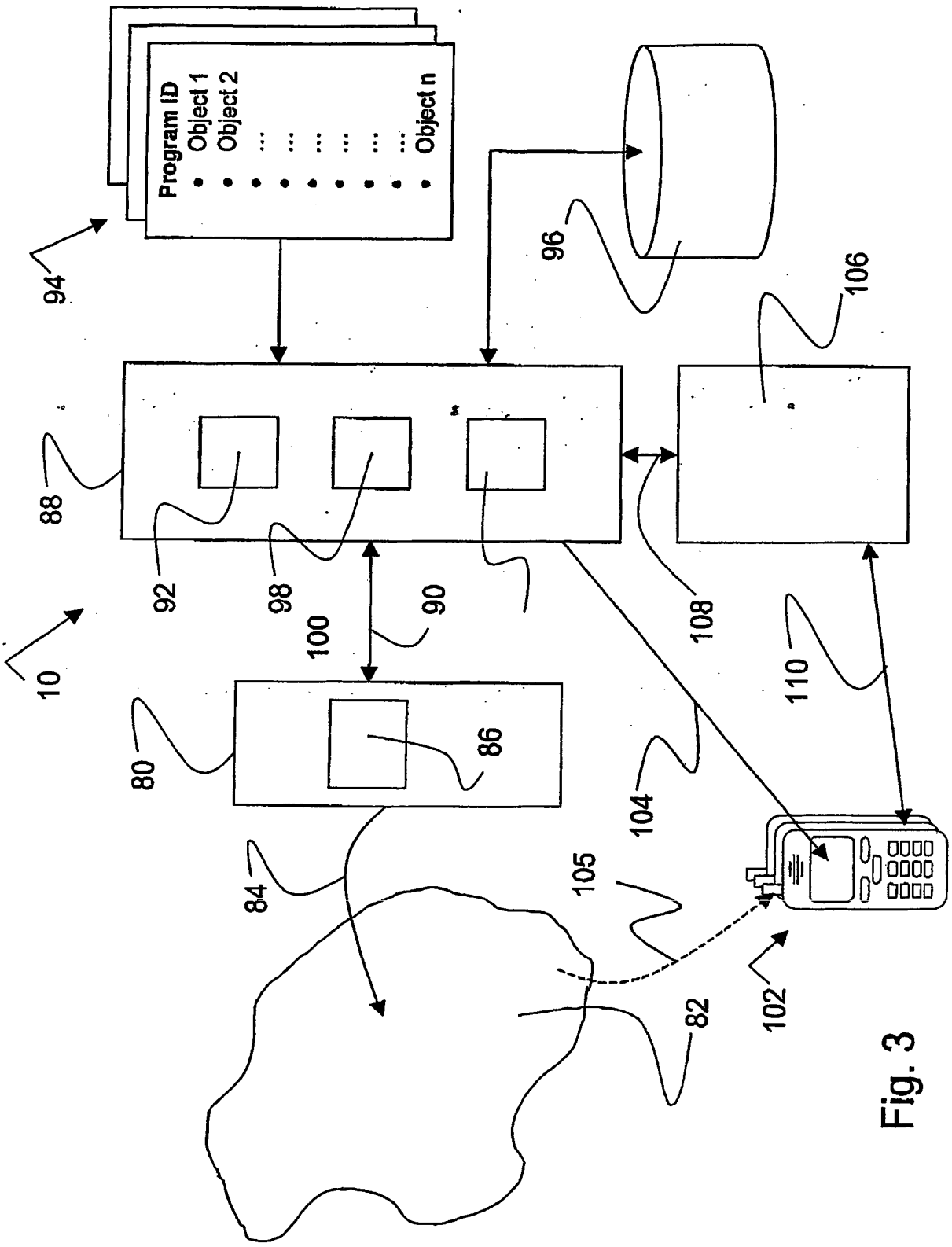
Program ID
Object 1
Object 2
Object n
94
96
106
88
92
98
90
100
108
110
10
80
86
104
84
105
102
82

Fig. 3

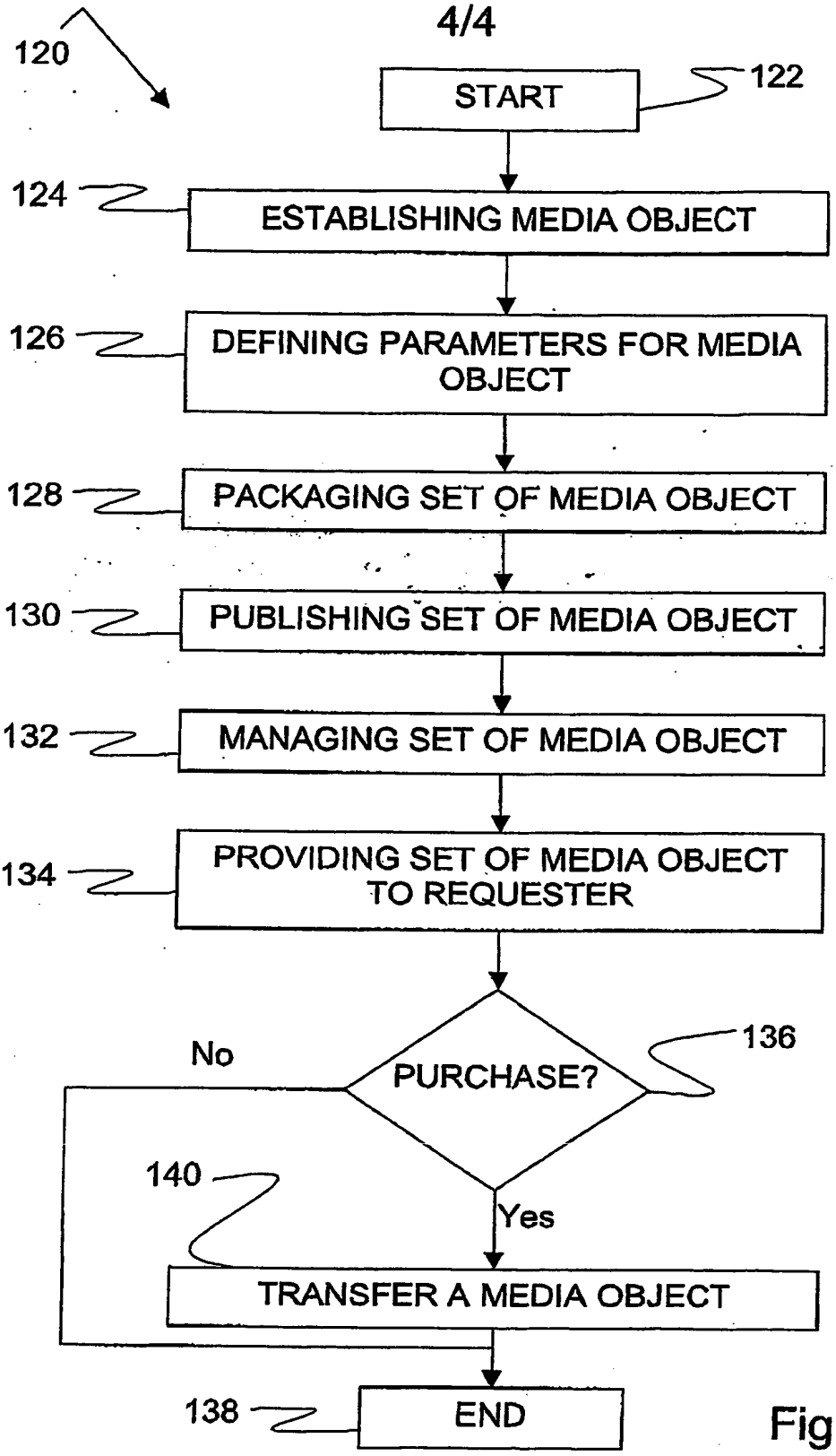
120
START
122
124
ESTABLISHING MEDIA OBJECT
126
DEFINING PARAMETERS FOR MEDIA OBJECT
128
PACKAGING SET OF MEDIA OBJECT
130
PUBLISHING SET OF MEDIA OBJECT
132
MANAGING SET OF MEDIA OBJECT
134
PROVIDING SET OF MEDIA OBJECT TO REQUESTER
PURCHASE?
136
No
140
Yes
TRANSFER A MEDIA OBJECT
138
END

Fig. 4

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